

**Environment and Business WIN: \$9,358 Saved**

Amidst many other political alliances formed in an election year, an important collaboration among the Democratic National Convention Committee, the city of Boston, contractors and environmental advocates resulted in construction done with minimal environmental impact and added benefit to the surrounding community. The press boxes and other temporary structures were built with low-toxicity building products and featured modular design, which makes disassembly easier and helps the material retain value for salvage by doing things like working in standard sized sheets of material and using screws instead of nails.

Thanks to an early agreement to meet environmental goals, the contractor was able to include deconstruction and recycling wording into the specifications

used in bidding and scored a big one for the environment, recycling 87.6% of materials while sticking to a very compressed schedule in the middle of a city besieged by security agents.



**“Film at 11 ... “**  
The transformation of the Fleet Center got national press as a showcase of ‘green’ construction practices

<b>Project Summary</b>	
Timeframe	5/04 – 7/04
Square Feet: Luxury Boxes	9,000 s.f.
Media Pavilion	90,000 s.f.
Diverted Waste (tons)	<b>101.8</b>
Gypsum Wallboard	38.5
Metal	17.8
Carpet	1.9
Wood products	25.0
Cardboard / Insulation	13.5
Telecommunications cable	5.1
Disposed (mixed waste)	<b>14.5</b>
Total Waste Stream	<b>116.3</b>
<b>Cost Benefit</b>	
Avoided Disposal	\$4,659.87
Added Transportation	(\$1,091.84)
Salvage savings	\$7,950.00
Added coordination <sup>2</sup>	(\$2,160.00)
<b>Avg. disposal (per ton)<sup>1</sup></b>	<b>\$62.06</b>
<b>Avg. recycling (per ton)</b>	<b>\$31.37</b>
<sup>1</sup> includes transportation and metal salvage	
<sup>2</sup> environmental volunteers’ planning and loading time for the salvage material. Four people, 18 hours each @\$30/hour.	

**Project Description**

The project entailed providing workspace for the 15,000 media representatives during the convention in three areas: a media pavilion, the luxury boxes, and the media trailers. The walls and the floors of the luxury boxes were covered to shield them from wear. All areas were wired with miles of fiber optic cable to support live broadcast, and extra cooling units to keep the area livable under the theatrical lighting. All major networks presented a list of special requirements, including over 50 pages of different cable orders. The construction timeline was short, due to security planning challenges, but the doors opened to the delegates on time, regardless of any obstacles presented by the setting.

The environmental benefits of recycling got a boost from CERC, an environmental group determined to help the DNC minimize the environmental impact of the convention. As media coverage of local convention-related news scaled up, both greenGoat (a CERC member) and Shawmut saw their share of the spotlight, featured in news articles and a few press conferences.

## Spotlight on Modular Design

Sometimes, the biggest predictor of outcome is the initial planning session. And when time and space is tight, a little more advanced planning is needed. In this case, the contractor updated their bid specification to include recycling language. They built to preserve whole sheets of material, so that it could be reused.

**Modular design techniques, like using whole sheets of material fastened with tape instead of nails, made the salvage efforts much easier.**

This kind of design is being appreciated more and more, as seen in an increased demand for LEED certification in Boston commercial spaces. LEED features design that allows the space to conserve energy, water, resources, and city infrastructure. Although convention and trade show development is very temporary in nature, conservation of building materials is relatively easy to do when the contractor and client support the salvage concept. In this case, environmental goals were quickly taken up as part of the client's media plan, reinforced by the fact that both the project manager and the resource adviser were LEED certified.

## Costs and Benefits

Owing to the rigors of a very central project site and the compressed timeframes, greenGoat reached out for the help of Boston Material Resource Center and Boston ReStore to reach timely end markets for the salvaged plywood, masonite, and homosote. The contractor included on-site storage of the materials in their conversations with the demolition contractor, which affected the work sequence. The venue approved a space for storage that wasn't needed for anything during the disassembly work phase.

The extra planning paid off, saving the contractor **\$4,659** in tip fees. Some markets were quite a distance, costing more in trucking (but the net savings was still substantial). The unseen side of the savings is the discount (*50% of retail price at a national building material chain*) provided to the salvage recipient, amounting to **\$7,950** ... a significant help for those renovating on a shoestring budget.

In terms of labor costs, material stacking and storage work time was roughly the same as it would have been for traditional demolition, due to the way in which the materials were installed. For example, the masonite sheets were taped together to cover the floor, so whether the sheets are headed to a dump or a church renovation, de-installation means pulling up the tape and loading the material onto a cart.

## How to Replicate

*Ways to maximize savings on any site:*

- People do what they're paid to do: get it in the spec!
- Phased media interaction is a great way to keep the team motivated and the public informed throughout the project.
- A lot of material reuse was built into vendor choices: the convention industry is served by companies that reuse most of the materials show after show
- Resource conservation is an issue that draws in the community ... use on line material exchanges and community centers to reinforce this waiting network.
- Get *all* the recycling specifications on the front end: the gypsum recycler could only accept one load per day, which meant that some gypsum dumpsters were shifted to other materials.
- If space is tight, consider distributing salvage materials off site to minimize on-site traffic. Demolition began Friday at 3am and continued around the clock; it was more appropriate to put off salvage pickup until later the next week.

### Resource Conservation

greenGoat  
PO Box 441911 (Somerville, MA 02144)  
Contact: Amy Bauman  
Phone: 617-666-5253  
Email: [abauman@greengoat.org](mailto:abauman@greengoat.org)  
Web Site: [www.greengoat.org](http://www.greengoat.org)

### Client

Democratic National Convention Committee  
Contact: Kevin Conroy  
Phone: (617) 573-4596

### Contractor

Shawmut Design and Construction  
560 Harrison Ave (Boston, MA 02118)  
Contact: Tom Perry  
Phone 617-622-7375  
Email: [tperry@shawmut.com](mailto:tperry@shawmut.com)

greenGoat diverts *post-industrial* (i.e. construction debris) and *post-consumer* (i.e. demolition debris) building materials out of landfills and back into other structures ... even other industries.

We would like to thank Coalition for Environmentally Responsible Conventions for their support in recycling programs, fuel cells and 'green' buying guidelines during the convention. This project was part of a larger collaboration to minimize the environmental impact of this and other conventions on the urban environment. To learn more about CERC, please see [www.cerc04.org](http://www.cerc04.org).